IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Sakae KOYATA et al.

Group Art Unit : 1792

Appl. No. : 10/561,821

Examiner : OLSEN, Allan W.

Filed : February 7, 2007

Confirmation No. : 2851

For : PROCESSING METHOD OF SILICON WAFER

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop Amendment
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir :

In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and §§1.97-1.98, and supplemental to the Information Disclosure Statement that was previously filed on December 8, 2008, Applicants hereby bring to the attention of the Examiner machine English translations of two Japanese patent publications which were previously cited in the December 8, 2008 Information Disclosure Statement: the following documents which are cited in the specification of the above-referenced application:

1. JP 2003-100701A, full machine English translation;

2. JP 2003-203890A, full machine English translation.

Applicants note that above-noted document (1) discloses a process for obtaining good flatness on both surfaces of a wafer where the rear surface roughness is reduced and the front surface of the wafer is mirror surface polished. The reference discloses an etching method in

which an alkali etching is performed by means of a dipping method after an acid etching. The concentration of an alkali etching solution as well as the etching rate of an acid etching are set within a predetermined range, respectively, thereby attaining the above objects (see claim 1). The reference is silent regarding the concentration of phosphoric acid. The acid etching is performed by a dipping method, in which the reaction gas resulting from etching remains on the surface of the wafer a long period of time, resulting in unsatisfactory flatness. Processing of a silicon wafer with an acid etching solution and an alkali etching solution, where the former contains at least 30% by weight phosphoric acid, based upon the weight of acid etching solution, and the acid etching is performed by a spin-coating method is not taught or suggested.

The above-noted document (2) discloses an etching method in which an alkali etching is performed by means of a dipping method after an acid etching. The document is silent regarding the concentration of phosphoric acid. Also, the acid etching is performed by a dipping method, in which the reaction gas resulting from etching remains on the surface of the wafer for a long period of time, resulting in a unsatisfying flatness or nanotopography effect. Acid etching by spin-coating to shorten the above-mentioned time by means of centrifugal force in comparison with the dipping acid etching is not taught or suggested.

Applicants further bring to the attention of the Examiner the following foreign office actions in the patent family of the present application:

3.. May 27, 2008 Japanese Notification of Reasons for Refusal and English translation thereof,

4. September 5, 2008 Japanese Decision of Refusal and English translation thereof,

5. August 10, 2007 First Chinese Notification of Reasons for refusal and English translation thereof,

6. June 20, 2008 Second Chinese Notification of Reasons for refusal and English translation thereof,

7. December 19, 2008 Chinese Decision of Refusal and English translation thereof,

8. September 29, 2006 Korean Notification of Reasons for Refusal, and

9. October 8, 2008 European Search Opinion, Communication pursuant to Article 94(3) EPC.

Copies of each of documents 3-9, which includes English translations of documents 3-8 are submitted herewith. All references cited in documents 3-9 were previously submitted with the December 8, 2008 Information Disclosure Statement. The relevance of these documents, as ascertained with respect to the foreign claims by the foreign Examiner, is set forth in the Office Actions and European Search Report.

The Examiner is also notified of applicants' copending, commonly assigned U.S. application no. 10/562,236, filed February 7, 2007, published as U.S. Patent Publication No. 2007/0119817 A1.

Applicants respectfully request that the Examiner consider the above material and cite the two full English translations (documents 1 and 2) by initialing the attached form PTO-1449 and

returning a copy of the completed Form to Applicants with the next official communication in the present application.

Applicants note that an Office Action on the merits has issued in the present application, and thus a fee of $180.00 is submitted herewith to ensure consideration of this statement and the submitted material. The undersigned hereby authorizes the Commissioner to charge any additional fee or to credit any overpayment in the fee to Deposit Account No. 19-0089 . (P35790)

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed telephone number.

Respectfully Submitted,
Sakae KOYATA et al.

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Enc. Form PTO-1449 (1 sheet)
Two machine English translations of Japanese references (Items 1 and 2)
Foreign Office Actions and English translations thereof (Items 3-8)
European Search report (Item 9)